NPIC/TSSG/RED-102-70

31 MAR 1970

MEMORANDUM FOR: Director, National Photographic Interpretation Center

SUBJECT : Request for Approval of a Contract with [redacted] 25X1
25X1 [redacted], to Devise and Demonstrate a Means of Improving the Vibration Characteristics of Light Tables at a Cost of [redacted] from FY-1970 R&D Funds 25X1

1. This memorandum requests approval for the commitment of R&D funds for a contract. The specific request is stated in Paragraph 6.

2. As exploitation equipment becomes more sophisticated, the problems caused by building vibration become more apparent. The effects of vibration are aggravated by higher magnifications, increased optical resolution, greater film resolution, and improved acquisition systems. These vibrations impair the usefulness of those viewing systems incorporating microscopes and microstereoscopes. These vibrations have been investigated and measured several times over the past years. The task to be accomplished is that of interpreting the existing data and devising appropriate corrective means to be applied to the viewing equipment itself.

3. The proposed project addresses itself principally to the problem of vibration in light tables. Several optical instruments, which exhibit high magnification, will be investigated within the building environment; existing data on vibrations in the building and on the devices used within it will be reviewed; and a practical vibration isolation and damping means will be devised for modifying a basic
25X1 [redacted] 940 Light Table. A vibration damping system will be designed and installed for demonstration. A final report will recommend improvements, estimate the benefits and cost of implementing these recommendations, and provide general guidance in developing specifications for the future design of high magnification optical systems to minimize the effect of vibration. These recommendations will also be utilized to make running changes to production versions of the 1540 Light Tables to improve their vibration characteristics. Letter progress reports will be submitted each month. Although this is the first attempt at correcting vibration problems in exploitation equipment, the technical risk is considered to be fairly low, because the principles involved in this effort are well known and have successfully been applied to other types of instrumentation. The contract will be completed twelve weeks after authorization to proceed.

SUBJECT: Request for Approval of a Contract with [redacted] 25X1
25X1 [redacted] to Devise and Demonstrate a Means of Improving the Vibration Characteristics of Light Tables, at a Cost
25X1 of [redacted] from FY-1970 R&D Funds

25X1 4. [redacted] submitted an unsolicited proposal for the performance of this work which is considered satisfactory by the Research and Engineering Division. Cost of the program would be
25X1 [redacted] The Agency will be required to furnish a [redacted] 940 Split 25X1
Format Light Table, complete with a [redacted] Stereomicroscope and 25X1
Rhomboids. The unit will be modified by [redacted] and 25X1
then returned to NPIC to demonstrate the improvements achieved.

5. Successful completion of this contract could result in modifying a substantial number of exploitation equipments within the building to improve their present vibration characteristics. No estimate of the numbers or cost involved can be made at this time.

6. It is requested that approval be granted to negotiate with
25X1 [redacted] for a contract to conduct the program described at a cost not to exceed [redacted] 25X1

Chief, Technical Services & Support Group, NPIC

Attachments:
1. Proposal
2. Form 2420

[redacted] 25X1

APPROVED: _____ 15 APR 1970
ARTHUR C. LUNDAHL Date
Director
National Photographic Interpretation Center

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